

## Clinical Efficacy of Adductor Canal Block in Medial Opening Wedge High Tibial Osteotomy

Byung Hoon Lee<sup>1</sup>, Yeokyung Kang<sup>2</sup>, Jaeang Sim<sup>3</sup>

<sup>1</sup>Gachon University, Gil Medical Center, <sup>2</sup>CORENTEC, <sup>3</sup>Department of Orthopaedics Surgery, Gachon University Gil Med Center

### Background

This video evaluates the effect of an adductor canal block (ACB) on short-term outcomes in patients who underwent a medial opening wedge high tibial osteotomy compared with a placebo.

### Methods

Thirty-five patients who underwent a unilateral medial opening wedge high tibial osteotomy between 2017 and 2019 were prospectively reviewed and randomly divided into two groups: 19 patients underwent a single-shot ACB and 16 patients underwent a saline injection (placebo group). The primary outcomes were pain (measured via the visual analog scale and range of motion), patient satisfaction, postoperative need for additional [opioids](#), quadriceps strength (measured via time to straight leg raise), clinical outcomes, and complications.

### Results

Pain scores were lower in the ACB group than in the placebo group during the first 12 hours postoperatively ( $P = 0.04$ ). The ACB group did not exhibit substantially less quadriceps strength weakness postoperatively. No statistical difference was reported in the time to straight leg raise between the ACB and placebo groups ( $23.5 \pm 17.7$  hours versus  $27.6 \pm 11.4$  hours, respectively;  $P = 0.520$ ). The opioid consumption rate in the first 12 hours postoperatively was significantly decreased in the ACB group compared with the placebo group (16.7% versus 70%;  $P = 0.017$ ). The proportion of patients who underwent more than five opioid injections during the first 72 hours postoperatively was lower in the ACB group compared with the placebo group (8.3% versus 50%;  $P = 0.043$ ). No localized or systemic complications were reported in either group.

### Conclusion

ACB after a medial opening wedge high tibial osteotomy is associated with better outcomes than a placebo with respect to opioid consumption, with no changes in quadriceps strength and complications.